Agency for Healthcare Research and Quality
Advancing Excellewnce in Health Care

Virginia Commonwealth University

A Personalized Portal to Promote Patient-Centered Preventive Care
MyPreventiveCare

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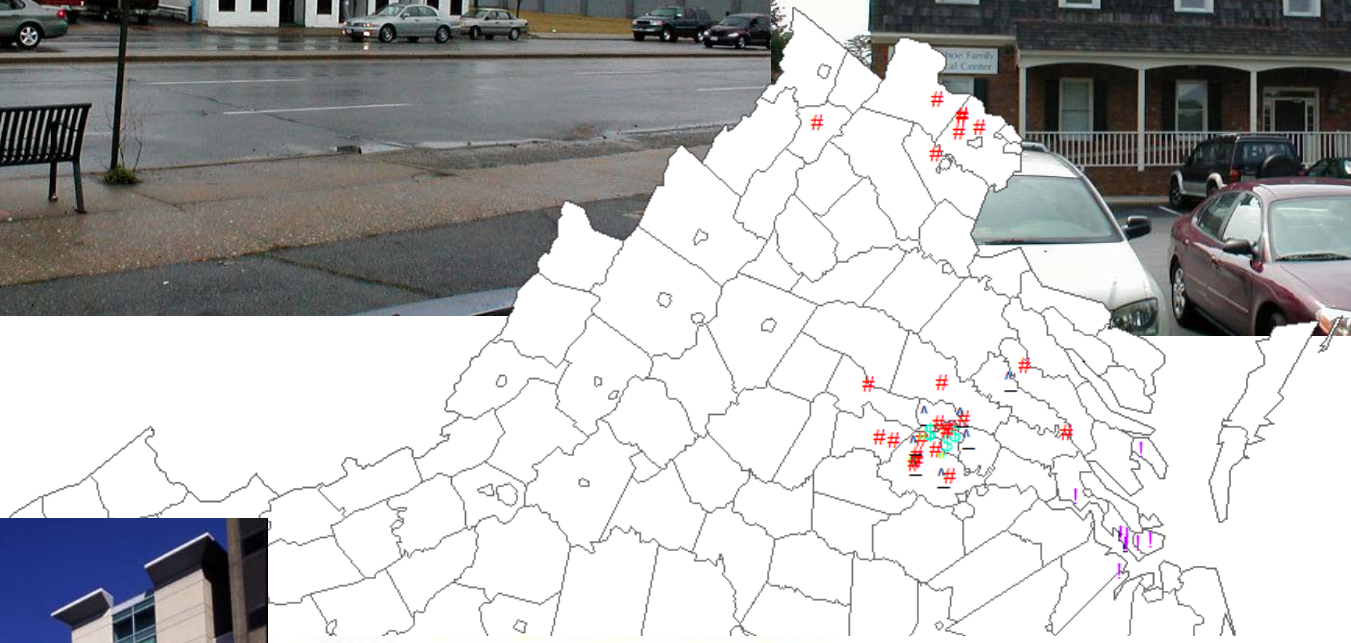

ACORN

"Dedicated to the Longitudinal Study of Primary Care Medicine"

VIRGINIA

Ambulatory Care Outcomes Research Network

Research Team

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MyPreventiveCare

- Integrated PHR-EMR
- Clinician and patient created for needs and workflow
- Platform shared by clinician and patient
- Focus on prevention and chronic disease
- Integrated clinical decision support logic
  - USPSTF, JNC VII, NCEP, ADA, ACS, AHA, ACIP, Dietary Guidelines for Americans
- Individually tailored patient messages and links
  - Partnered with ODPHP
- Patient and clinician reminder system

Study Designs

Effectiveness Study

- Evaluate whether using the system increases prevention
- 5500 patients randomized to a MPC-invitation vs. usual care
- 9/07 – 8/10
- R18 HS17046-01

Dissemination Study

- Assess best method of implementing the system
- Mixed methods – repeated measures analysis of use/delivery and learning collaboratives
- 9/10 – 8/12
- #290-07-100113

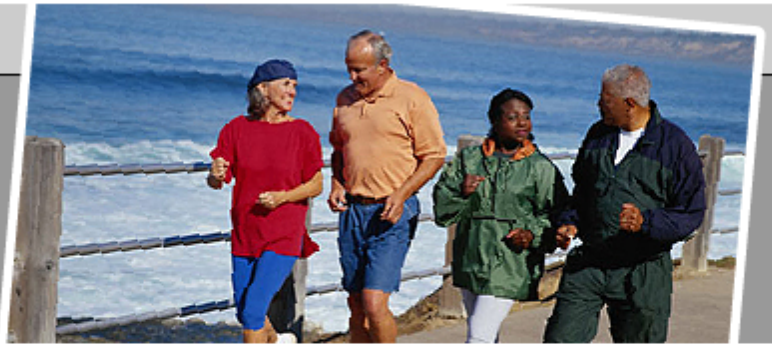
MyPreventiveCare Demonstration

1. Patient instructed to go to *MyPreventiveCare*

- May access directly on the web
  - http://www.MyPreventiveCare.com
  - http:// www.MyPreventiveCare.net
  - http:// www.MyPreventiveCare.org
- May access through an existing PHR
  - Link to *MyPreventiveCare* within a PHR that passes on patient information (single sign on)
  - *MyPreventiveCare* skin modified for seamless user experience

myPreventiveCare™

Make healthy choices and improve your life



My Preventive Care
Get the Prevention You Need
Helping You Stay Healthy
Keeping Information Private
How This Website Works
NEW USERS - Setup An Account

Interactive Preventive Health Record

My Preventive Care was developed by researchers at Virginia Commonwealth University. The purpose of the website is to help patients and their healthcare providers. The website is not part of a business venture. None of the researchers or developers stands to profit by your using the website.

What Is My Preventive Care?

My Preventive Care is a tool to help you and your doctor work together for prevention. It personalizes information for you. My Preventive Care does not just tell you what people should do to stay healthy --- it is all about what *you* need to stay healthy.

My Preventive Care will...

- Show you your preventive information in your doctor's record – like your blood pressure, when you last had tests, and some of your results.
- Tell you what preventive care you need based on your information and your doctor's recommendations.
- Direct you to information on the Internet that your doctor wants you to see to help you learn more about your prevention needs.
- Give you and your doctor reminders so that you don't have to worry about when you need to do preventive tests again.

"This website let me know what I need now"

"I will use it again. Very informative."

2. Patient completes a brief health risk assessment

- Because *MyPreventiveCare* relies primarily on EMR data, patient only needs to answer a few questions
- Questions are about data not stored well in EMRs
  - Race/ethnicity
  - Family history
  - Health behaviors
  - Some abnormal results (radiology, procedures)

myPreventiveCare™

Helping you take care of your health

NEW USERS - Setup An Account

Section 3 of 4: Health Interview - Lifestyle Questions

Your health habits (how often you exercise, what you eat, and whether you smoke) all have a big influence on your health.

During the past four weeks, how many servings of fruits and vegetables (combined total) did you usually eat each day? One serving is an average-sized piece of fruit, ½ cup cooked vegetables, or 1 cup of raw vegetables.

- ○ None
- ○ 1
- ○ 2
- ○ 3
- ○ 4
- ○ 5 or more

During the past four weeks, how many times per week did you participate in any physical activity that lasted for at least 30 minutes, such as walking for exercise, gardening, running, aerobics, or bicycling?

- ○ 0
- ○ 1
- ○ 2
- ○ 3
- ○ 4
- ○ 5
- ○ 6
- ○ 7

Do you now smoke cigarettes?

- ○ Yes
- ○ No

3. *MyPreventiveCare* receives patient-specific EMR data, patient reviews, and updates information

- 167+ EMR data elements that include:
  - Demographics, vital signs, diagnoses, orders, results, medications, immunizations, and management plans
- *MyPreventiveCare* presents a summary and patients are given an opportunity to update/modify information

Medical History
(from your doctor's record)

You have had . . .

Breast cancer	no
Cervical cancer	no
Colon cancer	no
High blood pressure	yes
High cholesterol	yes
Diabetes	yes
Heart disease	no
Asthma Emphysema	no
A hysterectomy	no

You do not take an aspirin daily.

Your Test Dates
(from your doctor's record)

You had . . .

a mammogram on 5/28/2008
a glucose test on 10/22/2008
an A1c test on 9/10/2008

You have never had . . .

a pap smear
a bone density test
a colonoscoopy
a sigmoidoscopy
a home blood stool test

Your Test Results
(from your doctor's record)

The most recent date and value of . . .

your weight on 12/15/2008 was 299 pounds
your height on 7/14/2006 was 5 feet and 7 inches
your blood pressure on 1/30/2009 was 124/70
your LDL cholesterol on 5/23/2008 was 89
your HDL cholesterol on 5/23/2008 was 36
your glucose on 10/22/2008 was 95
your A1c on 9/10/2008 was 9.1

You have no results for . . .

4. *MyPreventiveCare* categorizes the patient's status and gives a personal list of needs

- Categories based on decision logic
- The list quickly and simply shows patients what they need, what they are doing well with, and what they need to think about

Preventive Care You Need Now

Based on your information, these are the preventive services that you may want to do now.

- **Get Tested For Cervical Cancer**
  Get a Pap test every 1 to 3 years.
- **You May Need To Get Tested For Colon Cancer**
  Get tested regularly for colon cancer.
- **Get More Active**
  Get moving for 30 minutes or more everyday.
- **Quit Smoking**
  Get tips to help you quit -- and live a longer, healthier life.
- **Watch Your Weight**
  Balance the calories you eat with the calories you burn.
- **You Have High Cholesterol**
  Get the follow up care you need for your cholesterol.
- **Take Aspirin**
  Talk with your doctor about taking aspirin every day.
- **Your Last A1c Was High**
  Find out if you need to do anything to better control your diabetes.

Preventive Care to Learn More About

These are preventive services that are less clear. Depending on your values, you may or may not want to do these now.

- **Learn About Getting Tested For Chlamydia**
  If you are at risk, get tested for Chlamydia once a year.

5. A patient can learn more about any of their specific needs

- Patients can click on any topic on their summary list to see more detailed information
- Each message individually tailored
- Each message includes specific patient data
- Messages are evidence-based, reconcile differences between recommendations, promote shared decision-making, motivate and activate patients, and strengthen the doctor patient relationship
- Modeled after http://www.Healthfinder.gov

Your Prevention Recommendations

Get These Preventive Services
Keep These Illnesses In Check
Keep Up The Good Work
Think About The Future
Incomplete Information
Things You May Never Need

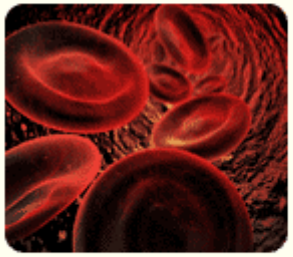
Manage Your Information

< Report Your New Information
< Give Us Feedback

General Information

< Setting Priorities
< Prevention Topics A to Z
< Useful Links
< Dictionary of Medical Terms

You Have High Cholesterol



Your Information

You have high cholesterol.
You had a cholesterol test on 5/23/2000.
Your LDL cholesterol was 89.
Your HDL cholesterol was 36.
You have 4 risk factors for heart disease. Your risks include: having diabetes, smoking, having hypertenstion and being overweight.
Given your risks, your goal LDL is less than 100.
You are due to get your cholesterol checked now.

The Basics

Since you have high cholesterol, you should have your cholesterol checked every year. It is good you had your cholesterol checked on 5/23/2000, but you are overdue to have it checked again. Given your risks, your goal LDL cholesterol is less than 100. It is good that your last LDL cholesterol was 89. Too much cholesterol in your blood can cause heart disease or a heart attack and a healthy lifestyle or medication can lower your cholesterol.

The Benefits

The good news is that cholesterol can be easily checked. And if your cholesterol is high, there are things you can do to control it. Lowering your cholesterol can reduce your risk of heart disease, strokes, and clogged arteries in your legs – and can help you live a longer, healthier life.

Your Next Steps

- Talk with your doctor about getting your cholesterol checked again now.
- Work with your doctor to continue to control your cholesterol.
- Live a healthy lifestyle to continue to control your cholesterol. This includes eating foods low in saturated fat, trans fat, and cholesterol, getting active, and controlling your weight.

Information to Guide Your Next Steps

See what your past cholesterol levels (HDL values, LDL values) have been.
Learn more about cholesterol.
Learn more about healthy lifestyles to maintain a good cholesterol level.

Back to Previous Page

6. At the end of each detailed message are links to more resources

- Links are meant to be like the patient's doctor showing them where to go on the web for more information
- Resources include educational material, risk calculators, health tools, local resources, and decision aids
- Links are individually tailored to each specific patient
- Resources are evidence-based from trusted, non-commercial, national organizations

http://www.nhlbi.nih.gov/health/public/heart/chol/wyntk.pdf - Microsoft Internet Explorer

File Edit Go To Favorites Help

Back Search Favorites

Address http://www.nhlbi.nih.gov/health/public/heart/chol/wyntk.pdf Go Links Snagit

1 / 6 109% Sign Find

National Cholesterol Education Program

High Blood Cholesterol
What you need to know

Why Is Cholesterol Important?

Your blood cholesterol level has a lot to do with your chances of getting heart disease. High blood cholesterol is one of the major risk factors for heart disease. A risk factor is a condition that increases your chance of getting a disease. In fact, the higher your blood cholesterol level, the greater your risk for developing heart disease or having a heart attack. Heart disease is the number one killer of women and men in the United States. Each year, more than a million Americans have heart attacks,

Done Unknown Zone

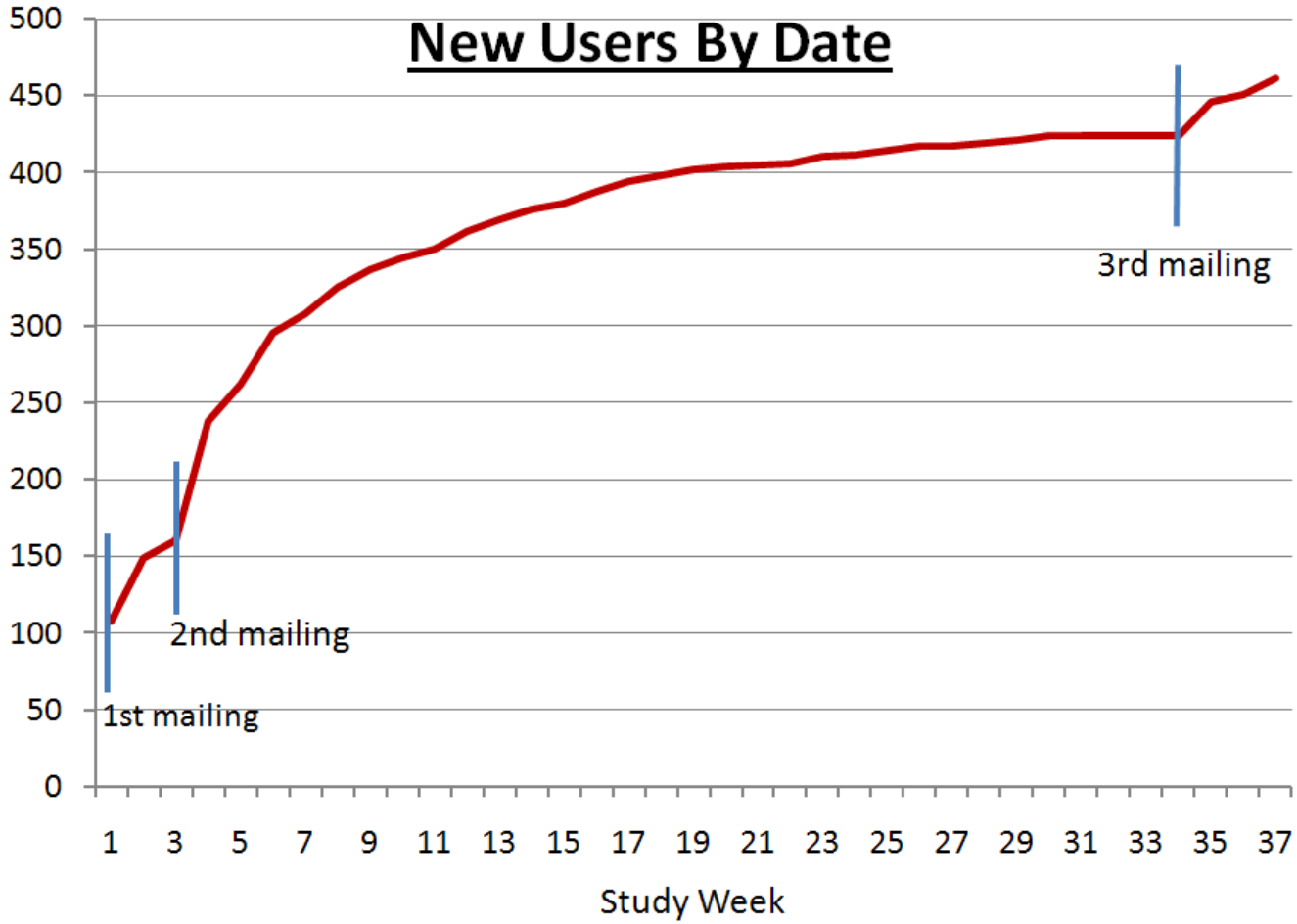
< Prevention Topics A to Z
< Useful Links
< Dictionary of Medical Terms

Information to Guide Your Next Steps

See what your past cholesterol levels (HDL values, LDL values) have been.
Learn more about cholesterol.
Learn more about healthy lifestyles to maintain a good cholesterol level.

Does *MyPreventiveCare* Work? (R18 Findings)

461(16.7%) Patients Used *MyPreventiveCare*

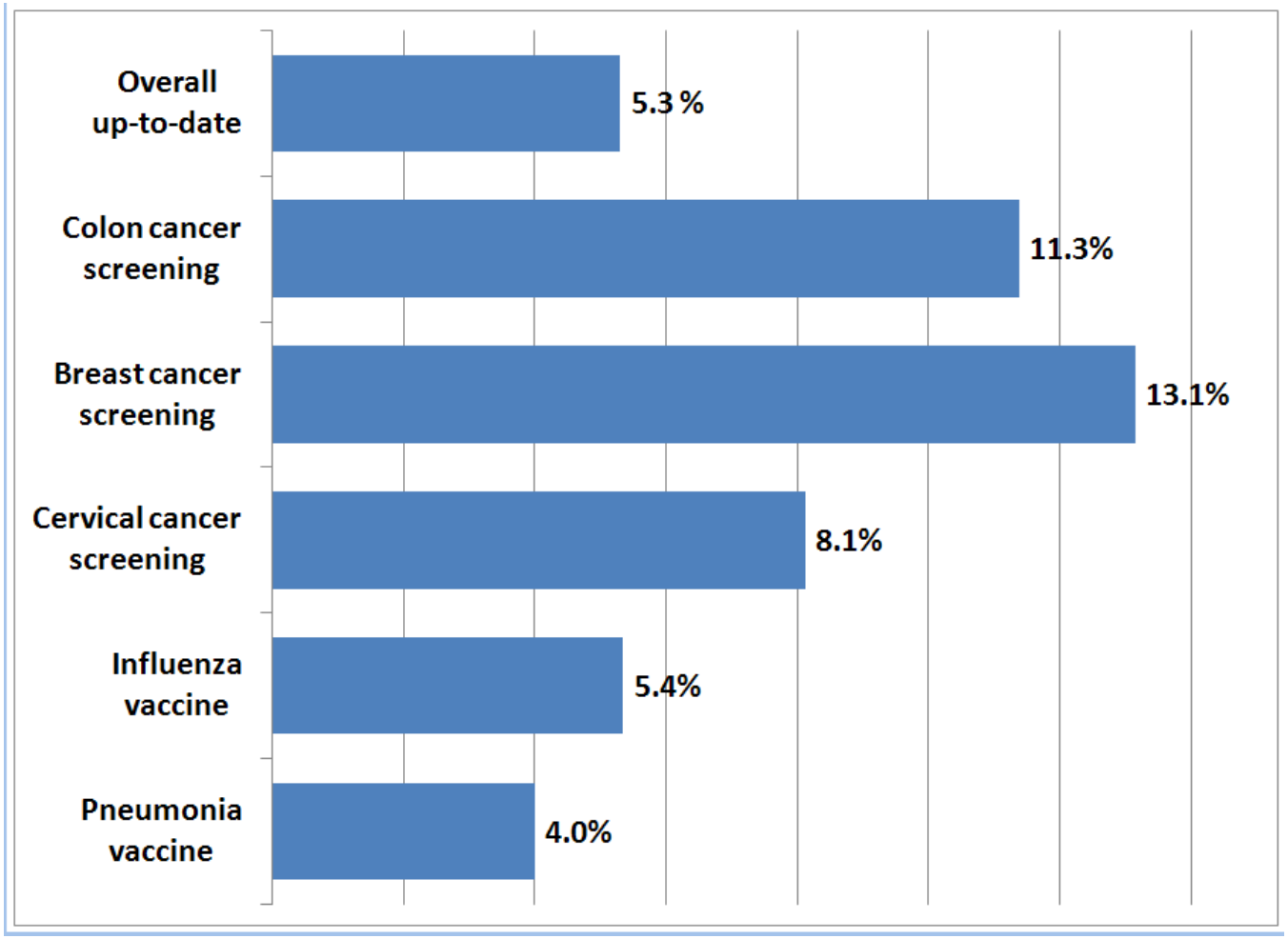


Process Impact of *MyPreventiveCare*

Clinician summary led practices:

- To update 59% of patients' medical records
- Contact 84% of patients
  - To schedule a wellness visit – 27%
  - To schedule a chronic care visit – 17%
  - To deliver a preventive service – 19%

Users vs. Non-Users More Up-to-Date



Implementing and Disseminating *MyPreventiveCare*? (Preliminary Task Order Experiences)

Its All About the Data

- Quality of EMR data is highly variable
  - Dependent on EMR database structure
  - Dependent on practice data entry
- Little adherence to standardized data exchange by EMR vendors (e.g. CCR/CCD)
- Standardized data exchanges are inadequate for prevention and chronic care
  - Lacks range of information (e.g. family history)
  - Lacks longitudinal historical perspective

Patient Functionality – Even More Needed

Patients want the system to be highly sophisticated and comprehensive. They want *MyPreventiveCare* to:

- Provide the full range of PHR functions
- Access their health information from all sources of care
- Address all their healthcare needs (i.e. beyond prevention)
- Be highly personalized

Practice Needs

- Use of *MyPreventiveCare* needs to be integrated into daily activities (i.e. – move beyond a mailed invitation)
- Use of *MyPreventiveCare* needs to benefit practices
  - Make workflow more efficient
  - Improve care delivery
  - Be financially viable
- EMR data entry needs to be easy and automated
- Support for maintaining data and population management
- Assurance of sustainability (i.e. Research = Fleeting)

Integrate with Widely Disparate Systems

- Convert to a service oriented architecture
- Cross highly secure network boundaries with the least disruption to the security barrier
- Provide flexibility for modular and partial integrations
- Maintain a scalable and responsive centralized system
- Requires vendor partnerships and collaboration

Thank you for you time and consideration